

Use Attainability Analysis

for

WBID 0933 Bear Creek

Submitted by
SES, Inc.

to

Missouri Department of Natural Resources
Water Protection Program

Date received: November 14, 2007

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A - Water Body Identification

I. Water Body Information (For water body being surveyed)

Water Body Name (from USGS 7.5' quad):	Bear Creek		
Missouri Water Body Identification (WBID) Number:	933		
8 digit HUC code:	10290108	County:	Johnson
Upstream Legal Description (from Table H):	T46N	R25W	Sec 32
Downstream Legal Description (from Table H):	T46N	R25W	Sec 3
Number of sites evaluated:	5		
List all site numbers, listed consequently upstream to downstream:	5, 4, 3, 2, 1		

Site Locations Map(s): Attach a map of the entire segment with assessment sites clearly labeled.
Mark any other items that may be of interest.

II. Facility Information (list all permitted discharges to the water body segment)

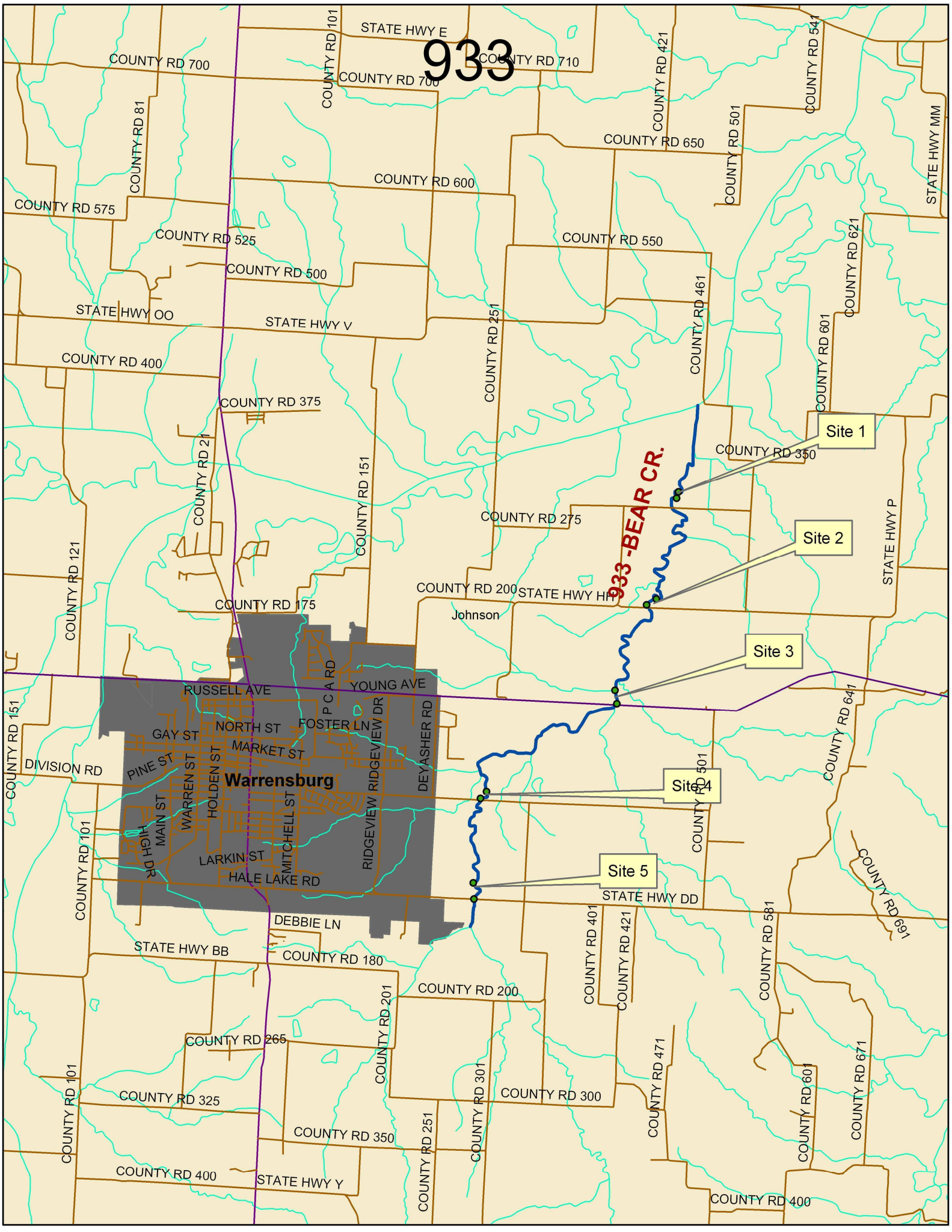
Facility Name(s) and Permit Number(s): Valley View Subdivision MO047171

III. UAA Surveyor (please print legibly)

Name of Surveyor:	Gilisa Gould	Telephone Number:	913.307.0054
Organization/Employer:	SES, Inc.		

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Signed: gilisa gould **Date:** 11.05.07



WBID # 933
 Site # 1

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.25.07	15:15	Site Location Description (e.g. road crossing):
Personnel: Gilisa Gould and Larissa Brown		CR 300
Current Weather Conditions: clear		Facility Name: Valley View Subd.
Weather conditions for the past 10 days: 2.17 inches		Permit Number: MO047171
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0442956	4295090		7.9	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0442990	4295192		5.7	

Photos:

Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose	Photo ID#:	Photo Purpose
99	downstream, T11	100	upstream, T11	101	downstream, T1
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
102	upstream, T1				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 933
 Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:
Comments: hayfields				

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

Substrate:

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
	20	20		40	20

Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 933
Site # 1

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa gould Date of Survey: 10.25.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>933</u> Site #: <u>1</u> Estimated Channel Incision: <u>4.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>0442990</u> UTM Y: <u>4295192</u> +/- <u>7.9</u> (meters) 11 UTM X: <u>0442956</u> UTM Y: <u>4295090</u> +/- <u>5.7</u> (meters) Average Stream Width: <u>7</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Gilisa Gould</u> and <u>Larissa Brown</u>	Dissolved Oxygen Date: <u>10.25.07</u> Time: <u>15:15</u> Dissolved Oxygen: <u>12.8</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>19.3</u> (°C)
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Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.1	0.01	0.7	0.05	0.7	0.05	0.5	0.05	1.0	0.05	1.0	0.05	0.8	0.05	0.7	0.05	0.8	0.10	0.7	0.05	0.1	0.01
2	0.2	0.05	1.4	0.01	1.4	0.10	1.0	0.20	2.0	0.10	2.0	0.20	1.6	0.15	1.4	0.15	1.6	0.30	1.4	0.15	0.2	0.05
3	0.3	0.05	2.1	0.01	2.1	0.15	1.5	0.20	3.0	0.20	3.0	0.20	2.4	0.25	2.1	0.20	2.4	0.30	2.1	0.20	0.3	0.05
4	0.4	0.10	2.8	0.05	2.8	0.15	2.0	0.15	4.0	0.25	4.0	0.05	3.2	0.35	2.8	0.35	3.2	0.30	2.8	0.20	0.4	0.10
5	0.5	0.10	3.5	0.05	3.5	0.15	2.5	0.10	5.0	0.75	5.0	0.00	4.0	0.40	3.5	0.35	4.0	0.25	3.5	0.15	0.5	0.10
6	0.6	0.10	4.2	0.10	4.2	0.15	3.0	0.05	6.0	0.70	6.0	0.00	4.8	0.30	4.2	0.30	4.8	0.20	4.2	0.15	0.6	0.10
7	0.7	0.05	4.9	0.15	4.9	0.10	3.5	0.05	7.0	0.40	7.0	0.05	5.6	0.20	4.9	0.35	5.6	0.30	4.9	0.15	0.7	0.05
8	0.8	0.05	5.6	0.10	5.6	0.10	4.0	0.05	8.0	0.20	8.0	0.10	6.4	0.20	5.6	0.30	6.4	0.25	5.6	0.15	0.8	0.05
9	0.9	0.05	6.3	0.01	6.3	0.05	4.5	0.10	9.0	0.10	9.0	0.10	7.2	0.10	6.3	0.10	7.2	0.05	6.3	0.15	0.9	0.05
Right Bank	1.0	0.00	7.0	0.00	7.0	0.00	5.0	0.00	10.0	0.00	10.0	0.00	8.0	0.00	7.0	0.00	8.0	0.00	7.0	0.00	1.0	0.00
Feature Type (riffle, run, or pool)	riffle		riffle		pool		pool		pool		pool		pool		pool		pool		pool		riffle	

(riffle, run, or pool)

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.05.07

WBID # 933
 Site # 2

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.25.07	15:55	Site Location Description (e.g. road crossing):
Personnel: Gilisa Gould and Larissa Brown		CR 200
Current Weather Conditions: clear		Facility Name: Valley View Subd.
Weather conditions for the past 10 days: 2.17 inches		Permit Number: MO047171
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0442474	4293360		4.2	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0442622	4293461		4.5	

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
103	downstream, T1	104	upstream, T1	105	downstream, T11
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
106	upstream, T11				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 933
Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

Substrate:

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
	30	30		30	10

Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 933
Site # 2

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa gould Date of Survey: 10.25.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>933</u> Site #: <u>2</u>															Dissolved Oxygen				
Estimated Channel Incision: <u>3.0</u> (m) (height between low bank width and water)															Date: <u>10.25.07</u> Time: <u>15:55</u>				
GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)															Dissolved Oxygen: <u>5.5</u> (mg/L)				
01 UTM X: <u>0442474</u> UTM Y: <u>4293360</u> +/- <u>4.2</u> (meters)															Dissolved Oxygen: _____ (% sat)				
11 UTM X: <u>0442622</u> UTM Y: <u>4293461</u> +/- <u>4.5</u> (meters)															Specific Cond: _____ (µS/cm)				
Average Stream Width: <u>7</u> (meters) Length of Survey Segment: <u>150</u> (meters)															Water Temperature: <u>17.1</u> (°C)				
(To determine Length of Reach) (20x average stream width)																			
Field Staff: <u>Larissa Brown and Gilisa Gould</u>																			

Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.8	0.05	0.7	0.10	0.6	0.20	0.5	0.01	0.8	0.05	0.7	0.05	0.7	0.05	0.1	0.05	0.4	0.05	0.5	0.01	0.9	0.10
2	1.6	0.15	1.4	0.20	1.2	0.30	1.0	0.01	1.6	0.20	1.4	0.20	1.4	0.15	0.2	0.05	0.8	0.05	1.0	0.05	1.8	0.20
3	2.4	0.30	2.1	0.20	1.8	0.45	1.5	0.05	2.4	0.25	2.1	0.40	2.1	0.15	0.3	0.05	1.2	0.10	1.5	0.05	2.7	0.40
4	3.2	0.20	2.8	0.20	2.4	0.45	2.0	0.00	3.2	0.20	2.8	0.35	2.8	0.25	0.4	0.10	1.6	0.10	2.0	0.05	3.6	0.40
5	4.0	0.45	3.5	0.25	3.0	0.35	2.5	0.01	4.0	0.15	3.5	0.20	3.5	0.20	0.5	0.10	2.0	0.15	2.5	0.01	4.5	0.40
6	4.8	0.40	4.2	0.25	3.6	0.20	3.0	0.05	4.8	0.05	4.2	0.10	4.2	0.20	0.6	0.10	2.4	0.15	3.0	0.05	5.4	0.25
7	5.6	0.20	4.9	0.20	4.2	0.15	3.5	0.01	5.6	0.10	4.9	0.05	4.9	0.20	0.7	0.10	2.8	0.20	3.5	0.05	6.3	0.15
8	6.4	0.05	5.6	0.10	4.8	0.05	4.0	0.01	6.4	0.05	5.6	0.05	5.6	0.10	0.8	0.05	3.2	0.10	4.0	0.05	7.2	0.05
9	7.2	0.10	6.3	0.05	5.4	0.01	4.5	0.01	7.2	0.05	6.3	0.01	6.3	0.01	0.9	0.01	3.6	0.05	4.5	0.01	8.1	0.05
Right Bank	8.0	0.00	7.0	0.00	6.0	0.00	5.0	0.00	8.0	0.00	7.0	0.00	7.0	0.00	1.0	0.00	4.0	0.00	5.0	0.00	9.0	0.00
Feature Type (rifle, run, or pool)	pool		pool		pool		rifle		pool		pool		pool		rifle		pool		rifle		pool	

(riffle, run, or pool)

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.05.07

WBID # 933
 Site # 3

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.25.07	16:30	Site Location Description (e.g. road crossing):
Personnel: Gilisa Gould and Larissa Brown		Highway 50
Current Weather Conditions: clear		Facility Name: Valley View Subd.
Weather conditions for the past 10 days: 2.17 inches		Permit Number: MO047171
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0441991	4291769		4.5	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0441964	4291982		4.8	

Photos:

Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose	Photo ID#:	Photo Purpose
107	downstream, T1	108	upstream, T1	109	downstream, T11
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
110	upstream, T11				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 933
 Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input checked="" type="checkbox"/> Other:

Comments:
 off highway

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering

comments/other:
 none

Substrate:

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
5	40	40		10	

Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 933
Site # 3

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa gould Date of Survey: 10.25.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>933</u> Site #: <u>3</u> Estimated Channel Incision: <u>4.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>0441991</u> UTM Y: <u>4291769</u> +/- <u>4.5</u> (meters) 11 UTM X: <u>0441964</u> UTM Y: <u>4291982</u> +/- <u>4.8</u> (meters) Average Stream Width: <u>7</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Gilisa Gould</u> and <u>Larissa Brown</u>	Dissolved Oxygen Date: <u>10.25.07</u> Time: <u>16:30</u> Dissolved Oxygen: <u>17.6</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>13.3</u> (°C)
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Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.6	0.05	0.4	0.01	0.6	0.01	0.4	0.01	0.3	0.01	0.4	0.01	0.6	0.05	0.7	0.05	0.7	0.05	0.6	0.01	0.7	0.01
2	1.2	0.05	0.8	0.01	1.2	0.05	0.8	0.05	0.6	0.05	0.8	0.05	1.2	0.05	1.4	0.10	1.4	0.10	1.2	0.05	1.4	0.01
3	1.8	0.05	1.2	0.01	1.8	0.10	1.2	0.15	0.9	0.05	1.2	0.05	1.8	0.05	2.1	0.15	2.1	0.15	1.8	0.10	2.1	0.20
4	2.4	0.05	1.6	0.00	2.4	0.10	1.6	0.15	1.2	0.05	1.6	0.01	2.4	0.20	2.8	0.20	2.8	0.20	2.4	0.20	2.8	0.25
5	3.0	0.05	2.0	0.00	3.0	0.15	2.0	0.15	1.5	0.05	2.0	0.00	3.0	0.15	3.5	0.25	3.5	0.20	3.0	0.30	3.5	0.20
6	3.6	0.01	2.4	0.05	3.6	0.15	2.4	0.10	1.8	0.10	2.4	0.00	3.6	0.10	4.2	0.20	4.2	0.20	3.6	0.30	4.2	0.20
7	4.2	0.01	2.8	0.10	4.2	0.10	2.8	0.15	2.1	0.10	2.8	0.01	4.2	0.10	4.9	0.15	4.9	0.10	4.2	0.35	4.9	0.20
8	4.8	0.05	3.2	0.10	4.8	0.05	3.2	0.10	2.4	0.10	3.2	0.05	4.8	0.05	5.6	0.15	5.6	0.01	4.8	0.35	5.6	0.15
9	5.4	0.01	3.6	0.01	5.4	0.01	3.6	0.05	2.7	0.05	3.6	0.01	5.4	0.05	6.3	0.05	6.3	0.01	5.4	0.40	6.3	0.05
Right Bank	6.0	0.00	4.0	0.00	6.0	0.00	4.0	0.00	3.0	0.00	4.0	0.00	6.0	0.00	7.0	0.00	7.0	0.00	6.0	0.00	7.0	0.00
Feature Type <small>(riffle, run, or pool)</small>	riffle		riffle		pool		pool		pool		riffle		pool		pool		pool		pool		pool	

(riffle, run, or pool)

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.05.07

WBID # 933
 Site # 4

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.25.07	17:00	Site Location Description (e.g. road crossing):
Personnel: Gilisa Gould and Larissa Brown	Division Road	
Current Weather Conditions: clear	Facility Name: Valley View	
Weather conditions for the past 10 days: 2.17 inches	Permit Number: MO047171	
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0439790	4290235		2.1	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0439893	4290340		6.0	

Photos:

Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
111	downstream, T1	112	upstream, T1	113	downstream, T11
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
114	upstream, T11				
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 933
Site # 4

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input checked="" type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

Substrate:

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
	30	30		30	10

Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 933
Site # 4

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa gould Date of Survey: 10.25.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>933</u> Site #: <u>4</u> Estimated Channel Incision: <u>2.0</u> (m) (height between low bank width and water) GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 01 UTM X: <u>0439790</u> UTM Y: <u>4290235</u> +/- <u>2.1</u> (meters) 11 UTM X: <u>0439893</u> UTM Y: <u>4290340</u> +/- <u>6.0</u> (meters) Average Stream Width: <u>7</u> (meters) Length of Survey Segment: <u>150</u> (meters) (To determine Length of Reach) (20x average stream width) Field Staff: <u>Gilisa Gould</u> and <u>Larissa Brown</u>	Dissolved Oxygen Date: <u>10.25.07</u> Time: <u>17:00</u> Dissolved Oxygen: <u>6.4</u> (mg/L) Dissolved Oxygen: _____ (% sat) Specific Cond: _____ (µS/cm) Water Temperature: <u>14.7</u> (°C)
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Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.1	0.01	0.2	0.05	0.2	0.10	0.3	0.05	0.4	0.10	0.3	0.05	0.5	0.10	0.6	0.05	0.6	0.05	0.6	0.20	0.5	0.05
2	0.2	0.05	0.4	0.05	0.4	0.20	0.6	0.15	0.8	0.10	0.6	0.15	1.0	0.20	1.2	0.20	1.2	0.30	1.2	0.20	1.0	0.10
3	0.3	0.10	0.6	0.10	0.6	0.30	0.9	0.20	1.2	0.00	0.9	0.15	1.5	0.30	1.8	0.55	1.8	0.55	1.8	0.25	1.5	0.20
4	0.4	0.05	0.8	0.10	0.8	0.30	1.2	0.30	1.6	0.00	1.2	0.10	2.0	0.30	2.4	0.65	2.4	0.60	2.4	0.20	2.0	0.25
5	0.5	0.01	1.0	0.20	1.0	0.20	1.5	0.50	2.0	0.00	1.5	0.05	2.5	0.30	3.0	0.65	3.0	0.40	3.0	0.15	2.5	0.20
6	0.6	0.01	1.2	0.20	1.2	0.20	1.8	0.55	2.4	0.05	1.8	0.05	3.0	0.25	3.6	0.50	3.6	0.20	3.6	0.10	3.0	0.15
7	0.7	0.00	1.4	0.20	1.4	0.10	2.1	0.40	2.8	0.10	2.1	0.01	3.5	0.20	4.2	0.35	4.2	0.30	4.2	0.10	3.5	0.15
8	0.8	0.01	1.6	0.10	1.6	0.10	2.4	0.20	3.2	0.10	2.4	0.01	4.0	0.10	4.8	0.15	4.8	0.05	4.8	0.05	4.0	0.10
9	0.9	0.01	1.8	0.10	1.8	0.10	2.7	0.05	3.6	0.01	2.7	0.01	4.5	0.05	5.4	0.05	5.4	0.01	5.4	0.01	4.5	0.05
Right Bank	1.0	0.00	2.0	0.00	2.0	0.00	3.0	0.00	4.0	0.00	3.0	0.00	5.0	0.00	6.0	0.00	6.0	0.00	6.0	0.00	5.0	0.00
Feature Type (riffle, run, or pool)	pool		pool		pool		pool		riffle		riffle		pool		pool		pool		pool		pool	

(riffle, run, or pool)

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.05.07

WBID # 933
 Site # 5

Field Data Sheets For Recreational Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time: 10.25.07	17:30	Site Location Description (e.g. road crossing):
Personnel: Gilisa Gould and Larissa Brown		Highway DD
Current Weather Conditions: cloudy		Facility Name: Valley View Subd.
Weather conditions for the past 10 days: 2.17 inches		Permit Number: MO047171
Drought conditions?: No drought <input checked="" type="checkbox"/> ; Phase I <input type="checkbox"/> ; Phase II <input type="checkbox"/> ; Phase III <input type="checkbox"/> ; Phase IV <input type="checkbox"/> ; Unknown <input type="checkbox"/>		

Site Location:

Location Coordinates (Universal Transverse Mercator Projection, In Meters)					
Site 01	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0439690	4288613		7.0	
Site 11	Easting (UTM X):	Northing (UTM Y):	Horizontal Accuracy:	Meters	
	0439673	4288872		6.4	

Photos:

Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose	Photo ID#:	Photo Purpose
115	downstream, T1	116	upstream, T1	117	cow tracks
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose
118	downstream, T11	119	upstream, T11		
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose	Photo ID#	Photo Purpose

Uses Observed:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other:
Describe:				

WBID # 933
Site # 5

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Conditions:

<input type="checkbox"/> City/County parks	<input type="checkbox"/> playgrounds	<input type="checkbox"/> MDC conservation lands	<input type="checkbox"/> Urban areas	<input type="checkbox"/> Rural Residential
<input type="checkbox"/> Campgrounds	<input type="checkbox"/> State parks	<input type="checkbox"/> National Forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkways
<input type="checkbox"/> Boating accesses	<input checked="" type="checkbox"/> Fence	<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Steep Slopes	<input type="checkbox"/> Other:
Comments: none				

Evidence of Human Use:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot path/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Rope swings
<input type="checkbox"/> RV/ATV Tracks	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle	<input type="checkbox"/> Livestock watering
comments/other: none				

Substrate:

% Cobble	% Gravel	% Sand	% Silt	% Mud/Clay	% Bedrock
	30	40		30	

Aquatic Vegetation:

none

Water Characteristics:

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Color:	<input checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other:
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other:

WBID # 933
Site # 5

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)

Comments: (Please record any additional comments here.)

none

Please verify that you have completed all sections, checked all applicable boxes, and that the form is complete.

Surveyor's Signature: gilisa gould Date of Survey: 10.25.07

Organization: SES, Inc. Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet C - Field Survey Results

Waterbody ID: <u>933</u> Site #: <u>5</u>															Dissolved Oxygen				
Estimated Channel Incision: <u>3.0</u> (m) (height between low bank width and water)															Date: <u>10.25.07</u> Time: <u>17:30</u>				
GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM)															Dissolved Oxygen: <u>9.6</u> (mg/L)				
01 UTM X: <u>0439690</u> UTM Y: <u>4288613</u> +/- <u>7.0</u> (meters)															Dissolved Oxygen: _____ (% sat)				
11 UTM X: <u>0439673</u> UTM Y: <u>4288872</u> +/- <u>6.4</u> (meters)															Specific Cond: _____ (µS/cm)				
Average Stream Width: <u>7</u> (meters) Length of Survey Segment: <u>150</u> (meters)															Water Temperature: <u>17.7</u> (°C)				
(To determine Length of Reach) (20x average stream width)																			
Field Staff: <u>Gilisa Gould</u> and <u>Larissa Brown</u>																			

Station	Transect Cross-Section																					
	01		02		03		04		05		06		07		08		09		10		11	
	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.5	0.05	0.7	0.05	0.8	0.01	0.2	0.05	0.8	0.10	0.9	0.10	0.8	0.05	0.6	0.01	0.7	0.05	0.7	0.05	0.5	0.10
2	1.0	0.05	1.4	0.10	1.6	0.05	0.4	0.05	1.6	0.25	1.8	0.20	1.6	0.35	1.2	0.05	1.4	0.05	1.4	0.10	1.0	0.10
3	1.5	0.10	2.1	0.10	2.4	0.05	0.6	0.10	2.4	0.15	2.7	0.30	2.4	0.35	1.8	0.10	2.1	0.05	2.1	0.05	1.5	0.05
4	2.0	0.10	2.8	0.10	3.2	0.05	0.8	0.10	3.2	0.15	3.6	0.30	3.2	0.35	2.4	0.10	2.8	0.10	2.8	0.05	2.0	0.10
5	2.5	0.10	3.5	0.15	4.0	0.10	1.0	0.05	4.0	0.15	4.5	0.30	4.0	0.30	3.0	0.20	3.5	0.10	3.5	0.01	2.5	0.10
6	3.0	0.20	4.2	0.15	4.8	0.05	1.2	0.05	4.8	0.10	5.4	0.35	4.8	0.30	3.6	0.25	4.2	0.15	4.2	0.01	3.0	0.10
7	3.5	0.30	4.9	0.10	5.6	0.05	1.4	0.05	5.6	0.05	6.3	0.45	5.6	0.30	4.2	0.25	4.9	0.15	4.9	0.00	3.5	0.10
8	4.0	0.30	5.6	0.10	6.4	0.05	1.6	0.01	6.4	0.05	7.2	0.40	6.4	0.35	4.8	0.15	5.6	0.20	5.6	0.00	4.0	0.01
9	4.5	0.25	6.3	0.10	7.2	0.05	1.8	0.01	7.2	0.05	8.1	0.15	7.2	0.25	5.4	0.10	6.3	0.15	6.3	0.05	4.5	0.01
Right Bank	5.0	0.00	7.0	0.00	8.0	0.00	2.0	0.00	8.0	0.00	9.0	0.00	8.0	0.00	6.0	0.00	7.0	0.00	7.0	0.00	5.0	0.00
Feature Type (rifle, run, or pool)	pool		pool		pool		pool		pool		pool		pool		pool		pool		pool		pool	

(rifle, run, or pool)

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.05.07

WBID# 0933 Bear Creek



Site# 1 Photo ID# 101, Downstream T1



Site# 1 Photo ID# 102, Upstream, T1



Site# 1 Photo ID# 99, Downstream T 11



Site# 1 Photo ID# 100, Upstream, T 11

WBID# 0933 Bear Creek



Site# 2 Photo ID# 103, Downstream T1



Site# 2 Photo ID# 104, Upstream, T1



Site# 2 Photo ID# 105, Downstream T 11

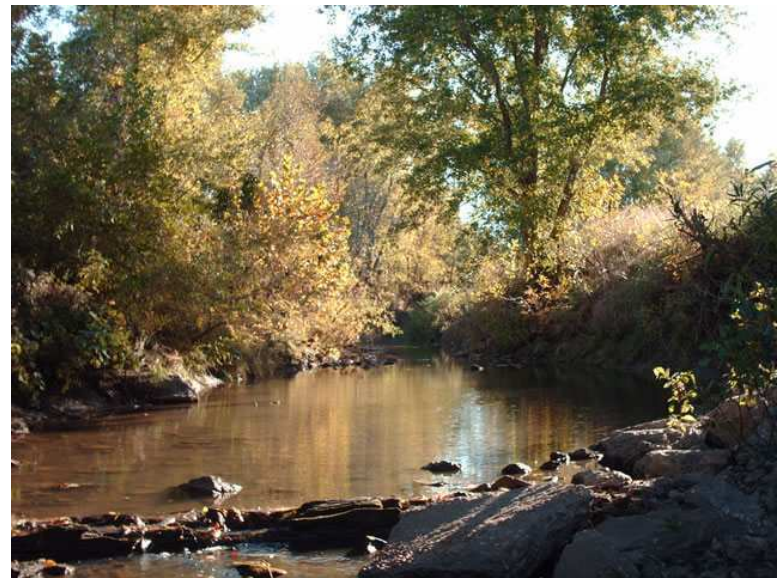


Site# 2 Photo ID# 106, Upstream, T 11

WBID# 0933 Bear Creek



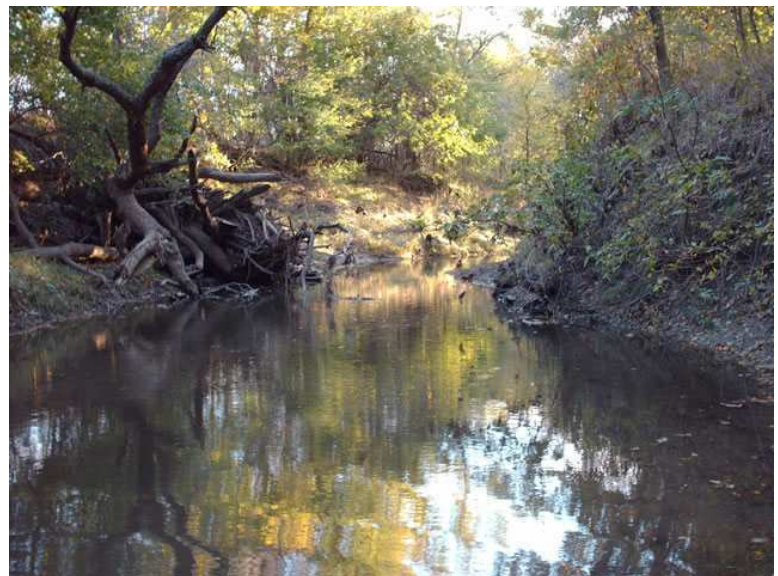
Site# 3 Photo ID# 107, Downstream T1



Site# 3 Photo ID# 108, Upstream, T1



Site# 3 Photo ID# 109, Downstream T 11



Site# 3 Photo ID# 110, Upstream, T 11

WBID# 0933 Bear Creek



Site# 4 Photo ID# 111, Downstream T1



Site# 4 Photo ID# 112, Upstream, T1



Site# 4 Photo ID# 113, Downstream T 11



Site# 4 Photo ID# 114, Upstream, T 11

WBID# 0933 Bear Creek



Site# 5 Photo ID# 115, Downstream T1



Site# 5 Photo ID# 116, Downstream T1



Site# 5 Photo ID# 117, Cow tracks

WBID# 0933 Bear Creek



Site# 5 Photo ID# 118, Downstream T 11



Site# 5 Photo ID# 119, Upstream, T 11

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet D – Recreational Use Interview

(must be completed for each interview)

I. Introduction

Stream Name and WBID: Bear Creek 933

Date & Time (include AM or PM): 3/6/08

Interviewed: ☐ In person ☒ By phone ☐ By mail

(NOTE: If you are an Interviewee filling out this form to mail back to DNR, proceed to Question #1.)

Interviewee selected because (e.g., house next to stream; standing by stream, etc.) Mr. Brenner
commented on 2005 UAA for other creeks in Johnson Co. In
the course of a follow-up phone call, he added this info on Bear Creek

Interviewer introduction to Interviewee: "My name is _____, I work for _____ (name of your employer) _____,
and I am collecting information on how people use _____ (name of the stream) _____."

ASK:

1.) Are you willing to respond to a survey about this stream? (It will just take a few minutes.)

☐ Yes ☐ No If yes, list contact information for the interviewee below:

Legal name: William Brenner, Presiding Johnson Co. Commissioner

Current mailing address: Johnson County Courthouse, 300 N. Holden
Warrensburg, MO 64093

Daytime phone number: (660) 747-6161

E-mail address (optional): _____

2.a.) Do you live in this area? ☒ Yes ☐ No

If yes, how many years? 73

2.b.) If you don't live in this area, are you still familiar with this stream? ☐ Yes ☐ No

If yes, how many years? _____

If no, thank the individual for taking the time to talk to you and conclude the interview.

3.) Are you familiar with this particular stretch of the stream? (show them the map, pointing out local landmarks
such as roads, bridges, property lines) ☐ Yes ☐ No

If yes, proceed to "II. Personal Use?".

If no, proceed to Section V.

II. Personal Use?

1.) Have you or your family personally used the stream for recreation since November 28, 1975? ☐ Yes ☒ No

If yes, proceed to #3.

If no, proceed to, and complete #2.

2.a.) If no, list reasons stream not used. _____

b.) From here proceed to "III. Witnessed Use?".

3.) How do you use the stream?

Whole Body Contact Recreation (WBCR)☐ Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing**If Interviewee (or family) used the stream for WBCR since Nov. 28, 1975, ask:**

4.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

_____4.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). __________
_____**Secondary Contact Recreation (SCR)**☐ Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: _____**If Interviewee (or family) used the stream for SCR since Nov. 28, 1975, ask:**

4.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

_____4.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). __________

4.e.) Which of these times and places (if any) did children wade or play? _____

_____**III. Witnessed Use?**

1.) Have you observed others using this stream for recreation since Nov. 28, 1975?

☐ Yes ☒ NoIf yes, proceed to #2.If no, proceed to, "IV. Anecdotal Use?".

2.) What kinds of uses have you witnessed?

Whole Body Contact Recreation (WBCR)☐ Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing**If Interviewee witnessed WBCR use since Nov. 28, 1975, ask the following questions:**

2.a.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

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2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

Secondary Contact Recreation (SCR)

☐ Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: _____

If Interviewee witnessed SCR use since Nov. 28, 1975, ask the following questions:

2.c.) When (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

2.d.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

2.e.) Which of these times and places (if any) did you specifically witness children wading or playing? _____

IV. Anecdotal Use?

1.) Have you heard about anyone using this stream since Nov. 28, 1975 for recreation – not seen or done yourself, but just heard about it? ☒ Yes ☐ No

If yes, proceed to #2.

If no, thank the individual for taking the time to talk to you and conclude the interview.

2.) What kind of uses have you heard about?

Whole Body Contact Recreation (WBCR)

☒ Swimming ☐ Tubing ☐ Snorkeling/Skin Diving ☐ Water Skiing

If Interviewee heard of WBCR use since Nov. 28, 1975, ask the following questions:

2.a.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? _____

through out summer. Maybe not in August, when only pools are left.

2.b.) Where, exactly? Describe specific location *and mark on the map* (See map requirements in the protocol). _____

at Hwy DD (Site #5) & all along ^{over} between E Division St. and Hwy 50.

WBID # 933Name of Person Interviewed BrennerSite # Date of Interview 3/6/08**Secondary Contact Recreation (SCR)**☐ Fishing ☐ Wading ☐ Boating ☐ Trapping ☐ Other: **If Interviewee heard of SCR use since Nov. 28, 1975, ask the following questions:**2.c.) When did these uses take place (e.g., year(s)?; season?; only after a rain?) and how often (times/year)? 2.d.) Where, exactly? Describe specific location and mark on the map (See map requirements in the protocol). 2.e.) Which of these times and places (if any) did you hear specifically of children wading or playing? **V. Others to Contact?**Can you recommend someone else we could contact that knows the stream? ☐ Yes ☐ NoIf yes, that person's contact info (name, address, phone, directions?)

If no, thank the individual for taking the time to talk to you and conclude the interview.

VI. Additional CommentsFrom the Interviewee: From the Interviewer: **VII. Information on Interviewer**

Has interviewer been trained by Missouri DNR to conduct UAA Interviews?

☐ Yes ☒ No

If yes, how? (check all that apply):

☐ Pre-Assessment Meeting☐ Workshop☐ On-line training seminar☐ Other. If "Other," list: Interviewer's Signature: Anne PeeryInterviewer's Name, Printed: Anne PeeryEmployer (where applicable): Dept. of Natural ResourcesInterviewer's Phone No.: 573-526-1426 E-mail: anne.peery@dnr.mo.gov

